

AMENDMENT TO THE CLAIMS

Claims 1-21 are pending in this application. Claims 1, 3, 4, 8, 13 and 19 are independent. Independent claims 1, 3, 4, 8, 13 and 19 are herein amended. No new matter has been added by these amendments.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 (CURRENTLY AMENDED): An optical apparatus having a drive circuit for controlling a moving member of the optical apparatus which moves within a movable range, comprising:

a determination circuit which determines a driving speed of the moving member on the basis of position data that represents the movable range with a predetermined normalized value, speed data represented in accordance with a normalized speed changing ratio within the predetermined normalized value, and a value representing an actual moving range of the moving member within the movable range.

2 (ORIGINAL): An apparatus according to claim 1, wherein said determination circuit determines the speed in accordance with a ratio of the value representing the actual range and the position data, and a value obtained by multiplying the speed data with the ratio.

3 (CURRENTLY AMENDED): An optical apparatus having a drive circuit for receiving speed data communicated from a unit which sends the speed data representing speed information and controlling, on the basis of the speed information, the speed of a moving member which moves within a movable range, comprising:

a determination circuit which determines a driving speed of the moving member on the basis of ~~the normalized speed information~~ and position information representing the

movable range as a predetermined normalized number and a normalized speed changing ratio
within the predetermined normalized number; and

a changing circuit which changes the number of position information representing the movable range as another normalized number, in accordance with time information required to move the moving member within the movable range, wherein the drive circuit drives the moving member at a speed determined by said determination circuit.

4 (CURRENTLY AMENDED): An optical apparatus having a drive circuit for receiving speed data communicated from a unit which sends the speed data representing normalized speed information and controlling, on the basis of the normalized speed information, the speed of a moving member which moves within a movable range, comprising:

a determination circuit which determines a driving speed of the moving member on the basis of normalized position data and the normalized speed data, the position data representing the movable range as a normalized number predetermined in accordance with a time for moving the moving member within the movable range and the normalized speed data representing a normalized speed changing ratio within the predetermined normalized number, wherein the drive circuit drives the moving member at a speed determined by said determination circuit.

5 (ORIGINAL): An apparatus according to claim 4, wherein the speed data represents a moving amount per unit time as a step number.

6 (PREVIOUSLY PRESENTED): An apparatus according to claim 5, wherein the position data represents the movable range as a step number.

7 (ORIGINAL): An apparatus according to claim 4, wherein said determination circuit determines the speed in accordance with a ratio of the speed data and position data.

8 (CURRENTLY AMENDED): An optical unit having a moving member moving within a movable range and a drive circuit for controlling a speed of the moving member, comprising:

a determination circuit which determines the speed of the moving member on the basis of position data representing the movable range as a predetermined normalized step number and speed data representing ~~a moving amount per unit time as another normalized step number within the movable range~~ a normalized speed changing ratio within the predetermined normalized step number,

wherein the step number of the position data representing the movable range is changed in accordance with a speed control state.

9 (PREVIOUSLY PRESENTED): A unit according to claim 8, wherein the step number of the position data is changed in accordance with time information required to move the moving member within the movable range.

10 (ORIGINAL): A unit according to claim 8, wherein the step number of the position data is so changed as to make a changing ratio of the speed of the moving member fall within a predetermined range with respect to a minimum change in speed data.

11 (PREVIOUSLY PRESENTED): A unit according to claim 10, wherein the step number of the position data is changed in accordance with time information required to move the moving member within the movable range.

12 (ORIGINAL): A unit according to claim 8, wherein said determination circuit determines the speed in accordance with a ratio of speed data and position data.

13 (CURRENTLY AMENDED): An optical unit having a moving member moving within a movable range and a drive circuit for controlling a speed of the moving member, comprising:

a speed control circuit which determines a speed of the moving member on the basis of position data representing the movable range as a predetermined normalized step number and speed data representing a ~~moving amount per unit time as another normalized step number within the movable range~~ a normalized speed changing ratio within the predetermined normalized step number; and

a communication unit which communicates the position data from an apparatus connected to said optical unit.

14 (PREVIOUSLY PRESENTED): A unit according to claim 13, wherein the step number of the position data changes in accordance with time information required to move the moving member within the movable range.

15 (PREVIOUSLY PRESENTED): A unit according to claim 14, wherein the step number of the position data is so set as to fall a changing ratio of the speed of the moving member within a the movable range with respect to a minimum change in speed data.

16 (ORIGINAL): A unit according to claim 13, wherein said speed control circuit determines the speed in accordance with a ratio of speed data and position data.

17 (ORIGINAL): A unit according to claim 13, wherein the speed data is communicated from the apparatus.

18 (ORIGINAL): A unit according to claim 13, wherein said optical unit comprises a lens unit, and the apparatus comprises a camera.

19 (CURRENTLY AMENDED): An optical unit having a moving member moving within a movable range and a drive circuit for controlling a speed of the moving member, comprising:

a determination circuit which determines a speed of the moving member on the basis of position data representing the movable range as a predetermined normalized step number and speed data representing a ~~moving amount per unit time as another normalized step number within the movable range~~ a normalized speed changing ratio within the predetermined normalized step number,

wherein the drive circuit drives the moving member at a speed determined by said determination circuit.

20 (ORIGINAL): A unit according to claim 19, wherein the speed data is communicated from an apparatus connected to said optical unit.

21 (ORIGINAL): A unit according to claim 20, wherein said optical unit comprises a lens unit, and the apparatus comprises a camera.